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**ENVIRONMENTAL
RESOURCE
MANAGEMENT
ELEMENT**

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ENVIRONMENTAL RESOURCE MANAGEMENT ELEMENT

CITY OF OCEANSIDE, CALIFORNIA

Prepared by:


**Planning Department
City of Oceanside
July, 1975**

Approved by:

**Planning Commission
City of Oceanside
August 4, 1975
Resolution No. 75-P45**

Adopted by:

**City Council
City of Oceanside
September 24, 1975
Resolution No. 75-175**



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LOUIS N. LIGHTFOOT

Planning Director



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August, 1975

Honorable Mayor and City Council
Chairman and Members of the
Planning Commission

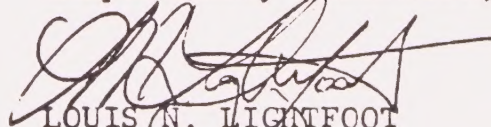
SUBJECT: Letter of Transmittal for
Environmental Resource Management Element

The Planning Staff is pleased to submit for your consideration the Environmental Resource Management Element of the General Plan. This Element is a combination of the Conservation and Open Space Elements, and represents an update of the 1968 Conservation and Recreation Element, and the 1973 Open Space Element.

The purpose of the Environmental Resource Management Element (ERME) is to provide a comprehensive program for the planned management, wise utilization and conservation of the natural resources in Oceanside. It is hoped that this document will serve as a basic source of environmental information for Oceanside, and that it will be useful in the planning process in assessing environmental impact.

This Element meets all the State legal requirements for an Environmental Resource Management Element, and represents the City's first official environmental inventory and comprehensive resource management program. It is our hope that the Planning Commission and the City Council will be able to use this Element as a basis for environmental resource decisions in determining the future of Oceanside.

Respectfully submitted,



LOUIS N. LIGHTFOOT
Planning Director

BDW:LNL:ld

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Table of Contents

Letter of Transmittal	i
City Officials.	ii
Table of Contents	iii
List of Maps.	iv
List of Tables.	iv
Chapter 1 - Introduction to Environmental Resource Management.	1
Authority.	2
Relationship to Other Elements	3
Scope.	4
Goal	5
Objectives	5
Chapter 2 - Methodology and Implementation.	8
Environmental Resource Management Process.	8
Implementation Alternatives.	11
Recommended Implementation Methods	15
Oceanside Implementation Program	18
Chapter 3 - Identification, Evaluation and Analysis of Natural Resources in Oceanside.	22
Water.	22
Soils, Erosion and Drainage.	34
Coastal Preservation	42
Minerals	44
Vegetation and Wildlife Habitats	47
Air Quality.	49
Agricultural Resources	51
Cultural Sites	53
Recreation; Scenic and Open Space Lands.	55
Bibliography.	60

List of Maps

<u>Map Number</u>	<u>Title</u>	<u>Page</u>
1	Water	29
2	Flood Plain	33
3	Soils and Land Forms	39
4	Homesite Limitation	41
5	Sand Deposits	46
6	Vegetation and Wildlife Habitats	48
7	Agricultural Land	52
8	Existing Open Space	59

List of Tables

--	Park and Recreation Standards	56
----	-------------------------------	----

Introduction to Environmental Resource Management

Environmental Resource Management is a workable program designed to conserve natural resources and preserve open space. It is founded on the principles of conservation which are the preservation, planned management and wise utilization of natural resources.

One of the primary methods of implementing the program is through open space planning. "Open Space" is generally defined as all areas of land and water in a more or less natural state not covered by man-made structures. This includes all natural areas untouched by man (bays, cliffs, forests, lagoons, mountains, ocean) as well as "developed" areas maintained in a natural state (cemeteries, parks, golf courses, farms and reservoirs). Urban open space, defined as natural areas surrounded by or in close proximity to intense urban development, has the additional requirement of being under some type of regulation or preservation measure to ensure continuance in a natural state.

In order to formulate the Environmental Resource Management program, it is necessary to identify, evaluate and analyze the natural resources of the community. This not only provides an inventory of the environmental assets of the City, but also provides a basis on which to judge the overall quality of the environment for purposes of conservation and maintenance of desirable natural features. It would also facilitate the evaluation of the environmental impact of new development on the existing eco-systems and geologic resources, while providing a useful tool in directing that development in an ecologically, aesthetically and economically sane manner.

AUTHORITY

This element combines the Conservation and the Open Space Elements of the General Plan. These elements are required by Government Code Sections 65302(d) and 65563, respectively. Section 65302(d) requires a conservation element as defined below:

"A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. That portion of the conservation element including waters shall be developed in coordination with any county-wide water agency and with all district and city water agencies which have developed, served, controlled or conserved water for any purpose for the county or city for which the plan is prepared. The conservation element may also cover:

- (a) The reclamation of land and waters.
- (b) Flood control.
- (c) Prevention and control of the pollution of streams and other waters.
- (d) Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan.
- (e) Prevention, control and correction of the erosion of soils, beaches and shores.
- (f) Protection of watersheds.
- (g) The location, quantity and quality of the rock, sand, and gravel resources."

Section 65563 requires that each city and county incorporate an Open Space Element into their General Plan. This section reads as follows:

"On or before December 31, 1973, every city and county shall prepare, adopt, and submit to the Secretary of the Resources Agency a local open space plan for the comprehensive and long-range preservation and conservation of open space land within its jurisdiction."

Oceanside has already complied with Section 65563 by adoption of the Open Space Element in December, 1973 (City Council Resolution No. 73-239, December 26, 1973). However, as pointed out in the State Guidelines, the data collected for the Conservation Element has a direct relationship to the Open Space Element, and may be combined in an effort to formulate a comprehensive Environmental Resource Management program.

RELATIONSHIP TO OTHER ELEMENTS

The Environmental Resource Management Element (ERME) serves as a depository of information that will in turn affect the policies of the other elements of the General Plan. ERME will be a source of technical information and form an environmental frame of reference for the findings and recommendations contained in the following elements:

1. Land Use: ERME defines geological characteristics of land areas, floodplains, minerals, prime agricultural lands, ecological and open space areas.

2. Public Safety: ERME describes flood control measures, soils characteristics and erosion problems.
3. Recreation and Education: ERME discusses unique geological features, ecological areas and cultural sites.
4. Housing and Population: ERME describes homesite limitations due to natural factors including steep slopes, floodplain development measures and water supply.
5. Circulation: ERME affects the Land Use Plan which, in turn, affects circulation.
6. Noise: Noise levels will have an effect on ecological areas. Mineral extractions will involve noise factor.
7. Scenic Highways: ERME identifies areas of significant visual impact.

SCOPE

For the purposes of this element, the scope will be confined to environmental resources within the city limits of Oceanside. However, as required by state law, this material was prepared to be consistent with county and state policies and programs. It is recognized that effective environmental resource management is the result of close coordination with county agencies as well as other governmental agencies and non-government organizations.

GOAL

The following is the goal of the Environmental Resource Management Element:

Evaluate the state of the environment and formulate a program of planned management, wise utilization and preservation of our natural resources to ensure the health, safety and welfare of present and future generations.

OBJECTIVES

The basic resources of the City and objectives for each topic are outlined below. A complete discussion of the findings for each subject is contained in Chapter 3, and the summary of Action Programs for these objectives is found in Chapter 2, "Methodology and Implementation."

Water

1. Plan for an adequate water system based on the projected needs of the City.
2. Investigate sources of local water supplies to reduce dependence on imported water.
3. Minimize pollution of water supplies, including lakes, rivers, streams, lagoons and ground water.
4. Minimize loss of life and property in flood prone areas.

Soil, Erosion and Drainage

1. Consider appropriate engineering and land use planning techniques to mitigate rapid weathering of the rocks, soil erosion and the siltation of the lagoons.

Coastal Preservation

1. Continue to cooperate with state and federal governmental agencies to resolve the problem of beach erosion.
2. Review and develop plans for the wise utilization of the coastal areas for the general welfare and socio-economic benefit of the community as a whole, taking into consideration the environmental recommendations of the Coastal Zone Commission, National Flood Insurance Administration and other governmental agencies dealing with the planned management and preservation of coastal resources.

Minerals

1. Regulate mineral extraction activities to minimize hazards and conflicts with other land uses as well as to preserve and enhance the appearance of the area.

Vegetation and Wildlife Habitats

1. Conserve and enhance vegetation and wildlife habitats, especially areas of rare, endangered or threatened species.

Air Quality

1. Cooperate with county, state and federal agencies in continuing programs of air quality improvement.

Agricultural Resources

1. Designate as agriculture on the Land Use Plan those areas of prime agricultural land which can still be economically cultivated.

Cultural Sites

1. Encourage the conservation and protection of significant cultural resources for future scientific, historic and educational purposes.

Recreation and Scenic Areas

1. Plan adequate recreation facilities based on existing recreation standards and criteria established by the appropriate agencies as contained in Education and Recreation Facilities Element.
2. Encourage the preservation of significant visual open spaces when such preservation is in the best interest of the public health, safety and welfare.

CHAPTER 2

Methodology and Implementation

In developing an approach to Environmental Resource Management, the State recommends an inventory and analysis of present and future urbanization, open space and environmental data of the area. The final selection of conservation and open space lands is then determined by the natural attributes of the land and the function it is serving. As a direct result of this analysis and survey, the best methods of conservation and open space implementation can be determined.

To aid in understanding this approach to resource management, the process has been grouped into two categories: (1) the preservation of open space lands and (2) conservation program to manage and improve environmental resources. Based on detailed studies of the environment, the Planning Department staff recommends the areas to be designated and the method of preservation. The City Council then must make the actual designations of open space and adopt the appropriate implementation program.

ENVIRONMENTAL RESOURCE MANAGEMENT PROCESS

Preservation of Open Space Lands

1. Identification, analysis and evaluation of environmental resources.
2. Identification of land capabilities: which land contains natural elements of environmental significance and which land is suitable for development.

3. Identification of Open Space uses and application of these uses to environmental resource areas:

Open space uses are defined in Section 65560, of the Government Code, as follows:

- (a) Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for the ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.
- (b) Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of ground water basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.
- (c) Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.
- (d) Open space for public health and safety, including but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, floodplains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

Based on these uses, a determination is made concerning the capability of land to serve as a significant environmental resource, and also which land will be needed to serve an open space function as specified by the current general land use plan.

4. Designation of Open Space Lands: Those lands capable of functioning as open space which will be needed as open space lands or significant environmental resources in the future should be designated "permanent open space land."
5. Preservation of Open Space Lands: Legal action, including acquisition, zoning, or contractual agreements must be taken to ensure preservation of those lands designated "permanent open space land."

Conservation Program to Manage and Improve Environmental Resources

The best method of conserving resources is the designation of Open Space lands. However, while it is important to preserve existing open space, it is also important to direct development in such a manner as to protect the environment and facilitate its wise utilization and maintain equilibrium with nature.

The Environmental Impact Report (EIR) process provides a useful tool for the planned management of our natural resources. Information in these reports should be interpreted to direct further action such as development conditions, zoning, building restrictions, landscaping and other requirements which will mitigate irreparable damage to the environment and/or hazard to the community.

IMPLEMENTATION METHODS

There are several available methods of conserving natural resources and preserving open space ranging from various degrees of land regulation to several different acquisition methods. The following list is by no means exhaustive; also, not all methods and techniques are being recommended for use in Oceanside.

IMPLEMENTATION ALTERNATIVES

I. Fee Acquisition

Acquisition is generally looked upon as the only guaranteed method of preserving open space. This is not strictly true; however, if money is available, it certainly is the best method. At any rate, acquisition of full fee is necessary whenever public access is required, such as in parks.

Methods of Fee Acquisition

1. Purchase
2. Gift
3. Trade or transfer of public land
4. Tax foreclosure
5. Street vacation
6. Urban redevelopment process
(Community Redevelopment Law)
7. By dedication, or by the required recreational dedication of cash or land from subdividers.
8. Eminent domain (taking for public purposes)

Funding Sources for Fee Acquisition¹

1. City Sources: General Fund, Contractors

¹These revenue sources are outlined in the Open Space Plan and Implementation Program prepared by the Comprehensive Planning Organization (San Diego, August 1973), p. 109.

license tax, Documentary license tax, Park user fees, Revenue bonds, Special bonding or taxing districts.

2. County Sources: County Service Area Law, California Resort District Law.
3. Regional Sources: Regional Parks Districts.
4. State Sources: State Transportation Fund ("Bicycle Lane Account"), Davis-Grunsky Act, Williamson Act, Bagley Conservation Fund.
5. Federal Sources: Revenue sharing, Open Space Land Program (HUD), Land and Water Conservation Fund (Department of Interior).
6. Private Sources: Non-profit organizations (i.e., Nature Conservancy, Small Wilderness Areas Preserve--SWAP, Trust for Public Lands); Service clubs, Chamber of Commerce, Public contributions and fund-raising drives.

II. Less Than Fee Acquisition

The purchase of less than fee interests is normally handled through easements or covenants which permit the acquisition of certain specified rights without acquiring the fee simple title. One drawback with this method is that often the cost of purchasing the interest approaches the cost of the full fee. This method

is especially effective for areas that will support an open space use not requiring public access, such as agriculture uses in floodplains.

Methods of Less Than Fee Acquisition

1. Open Space/conservation easements
2. Development rights and/or easements
3. Public easements to beaches, etc.
4. Slope conservation easements
5. Scenic easements (for highways, park entrances, historic sites and/or areas)
6. Public purchase and resale without certain rights

III. Zoning Actions

Zoning for Open Space preservation has the greatest potential; yet, at this time, it is probably the most controversial of the available methods. The current trend in California is to recognize the responsibility of government to protect not only public health and safety, but also the general public welfare. This has been broadly interpreted by the courts to include the preservation and protection of valuable natural systems. Traditionally, open space zoning has sought to prohibit development. Recently, however, it has been accepted that it is not necessary to cease development to meet the goals of an open space program. Zoning to regulate and control urbanization by encouraging Planned Community Developments, Planned Residential Developments, and cluster development will provide open space.

Zoning Alternatives

1. Setback requirements
2. Lot size requirements
3. Floodplain zoning
4. Ocean - submerged land (SL) zone

5. Zoning to preserve scenic amenity
 - (a) Aesthetic zoning (sign control, architectural control)
6. Exclusive agricultural zoning
7. Open Space - "O" zones - parks, open spaces, stream valleys, floodplains, watershed protection areas, cemeteries, golf courses and country clubs, where shown as open space on the General Plan. Other land should be considered for types of zones which restrict development on hillside areas, wetlands, slide areas and earthquake-prone areas.
8. Zoning for large lots
9. Planned Residential Development or Planned Community Developments, with open space requirements (cluster development).

IV. Other Restrictions on Development

Often referred to as "Phased Development", this method of preservation is primarily a delaying tactic. One of the functions open space serves is the control of growth to prevent the "leap-frogging" of City services to new development well beyond the fringe of current urbanization. This method of preservation is aimed at accomplishing this.

Phased Development Methods

1. Possible control over developments by the Federal Housing Agency (FHA)
2. Private restrictive covenants
3. Designation of "Open Space" on General Land Use Plan with necessary zoning (A.B. 1301)
4. Denial of public facilities
5. Requirements for Environmental Impact Statements
6. Subdivision Regulations

V. Property Tax Concessions

Many owners of valuable open space land in close proximity to urban areas have been pressured into developing their land as a result of high tax rates. Assessing land on the basis of its open space value rather than its potential development or market value is a relatively new concept and one which has not met with overwhelming success. The method usually requires voluntary participating by the landowner and preservation is limited in time by a contract.

Methods

1. By contract.
2. The California Land Conservation Act of 1968 (Williamson Act) allows valuation of farms at present use value.
3. California constitutional amendment providing tax exemptions for non-profit golf clubs (valuation for recreational use). In order to qualify for such exemptions, golf courses must be 10+ acres--non-profit.
4. Reduced tax assessment when the public has acquired development rights or other easements.

RECOMMENDED IMPLEMENTATION METHODS

There is a great deal of controversy surrounding implementation procedures for open space preservation and planned management. As previously mentioned, the methods available offer a wide range of approaches involving acquisition and regulation to various degrees.

In their study of open space preservation of the San Diego Region, the Comprehensive Planning Organization (CPO) endorses two main concepts of implementation:

1. "Phased" development
2. Regulation instead of Acquisition

Because of the limited implementation powers of CPO, it necessarily states that these two concepts must be vigorously pursued by local government.

Local government must initiate much of the needed action to realize this [phased] manner of growth. . . . Greater commitment and more aggressive action by local governments in the area of open space implementation is called for.²

They feel that existing state legislation is "basically adequate" to enable local jurisdictions to implement their open space plans successfully; however, local government "may have to fight some court cases."³

Phased growth is defined as being dependent upon the orderly extension of sewer, water, and transportation facilities. It is felt by the CPO that local governments should take a firm stand in denying growth in those areas not presently serviced by urban amenities and that specified timed limits of growth should be established and strictly adhered to. A policy of this type would involve preparation of a detailed capital improvements plan stating exactly which areas of the City would be serviced by particular dates. Development beyond these areas could then be legally curtailed allowing time to plan and purchase or regulate open space in the area. This is not an endorsement of limited development, but rather an approach to planned development which would not outstrip the City's ability to provide the necessary services.

Regulation of Open Space and management of natural resources, primarily by zoning, is endorsed by the CPO as being a less expensive

² San Diego Region, California, Comprehensive Planning Organization, Open Space Plan and Implementation Program, (San Diego, Aug., 1973), Implementation Map Supplement.

³ Ibid.

and, therefore, more realistic approach than outright acquisition. Acquisition is still mandatory where public access to the land is necessary, such as with parks.

Open Space Zoning is the recommended method for preserving floodplains and steep hillsides, along with adoption of a Grading Ordinance. In addition, development of a Natural Resource Overlay Zone would be necessary to limit development in wooded and wetland areas by requiring an Environmental Impact Statement on irreparable damage to defined natural resources. The CPO feels that liberal interpretation of Zoning restrictions by California courts would allow these regulations to succeed. They do caution, however, that such zoning ordinances must be fairly written, uniformly applied, and be primarily used to preserve areas of existing public benefit rather than create new areas. Open Space Zoning is not an enforceable restriction, such as an easement is, and although some tax benefits might accrue to the owner, these benefits would not be as great as might occur through a specific use contract with the City.

The question of agricultural land preservation receives repeated emphasis throughout the CPO report. In defense of preservation of agricultural land, the CPO cites the usual open space and psychological reasons. The only admittedly sound economical argument put forth is that "agriculture is the only land use that pays its own way in relation to the costs and benefits accruing to local government." In other words, the raise in the tax base caused by development is less than the cost to the City of providing the area with the necessary services. This argument further reinforces the CPO position in favor of specific capital improvement plans and phased development. They advocate preservation of agriculture land primarily by zoning and reduced assessment (Williamson Act) to create agricultural preserves.

OCEANSIDE IMPLEMENTATION PROGRAM

In conjunction with the summary of objectives stated in Chapter 1, the following is an outline of recommended action programs to implement and achieve these objectives. These recommendations are in conformance with CPO recommendations and previously accepted Oceanside policies and, in some cases, recommend further actions to ensure a planned resource management program.

ACTION PROGRAM: CITY OF OCEANSIDE

Water

1. The overall water master plan for the water system in Oceanside will be based on the Updated Water Master Plan for the City of Oceanside and successive amendments thereto.
2. The City will continue efforts in the areas of recharge and recovery in groundwater basins, wastewater reclamation and solid waste disposal to improve and conserve water resources.
3. The City will cooperate with county, regional, state and federal agencies in the preparation and enforcement of appropriate flood control measures. These include, but are not limited to, the following:
 - (a) Participation in the National Flood Insurance Program.
 - (b) Application of a "Flood Plain Overlay Zone" in areas delineated as the floodway.
 - (c) Application of General, Suburban and Dairy Agricultural zoning (A20, A5, A2 $\frac{1}{2}$) within the floodplain.
 - (d) Application of Planned Community Development (PCD) and Planned Residential Development (PRD)

zones with encouragement to dedicate land in flood encroachment areas as open space.

Soils, Erosion and Drainage

1. The City will continue to enforce the Grading Ordinance (Ord. No. 73-46) to prevent erosion of the soils and hill-sides.
2. The City will consider a Hillside Ordinance as recommended in the Public Safety Element for the preservation and safe utilization of steep slopes.
3. The City will encourage hilltop development and steep slope preservation by using the cluster overlay on the Land Use Plan, and the application of Planned Community Development (PCD) and Planned Residential Development (PRD) zones with encouragement to retain open space in high slope areas.
4. The City will direct the Planning Department and the Engineering Department to compile from existing information a single Master Plan of the existing drainage system in the urbanized downtown area.

Coastal Preservation

1. The City will continue a program of periodic replenishment of the beach by artificial means, in cooperation with the Army Corps of Engineers, until a permanent solution is constructed to prevent beach erosion.

Minerals

1. As per the Zoning and Grading Ordinances, extraction of mineral deposits will be controlled by the issuance of conditional use permits in order to provide maximum utilization as well as maximum protection to the environment and the community.

Vegetation and Wildlife Habitats

1. Where appropriate, the City will apply "Open Space ("O") zoning to areas of significant scenic, ecological or recreational value.
2. Areas containing unique vegetation and wildlife habitats will receive a high priority in the planning of parks. Specific plans will be developed for areas where there is occurrence of endangered or threatened species in conjunction with regional and county agencies where appropriate.
3. In areas where habitat modification is inevitable, mitigating and/or compensatory measures such as native plant restoration, land reclamation or donation, will be considered.

Air Quality

1. The City will continue to cooperate with the San Diego County Air Pollution Control Board. This will include participation in the development of the Regional Air Quality Strategy (RAQS) through cooperation with the San Diego County Air Quality Planning Team.

Agricultural Resources

1. Under a program of phased development, extension of City services (sewers, etc.) to agricultural areas will be limited.
2. The City will encourage voluntary participation of property owners in Williamson Act contracts.
3. The City will apply General, Suburban and Dairy Agriculture Zones (A-20, A-5, A-2 $\frac{1}{2}$) and Residential-Agricultural (R-A) zone with minimum lot size of one acre to areas of significant productive agricultural use.

Cultural Sites

1. The City will encourage the use of "O" zoning and open space easements for the preservation of cultural sites.
2. The City will encourage private organizations to acquire, restore and maintain significant historical sites.
3. The City will encourage investigation by the appropriate groups (i.e., museums, university students, etc.) to explore and record the significant archaeological sites in the area and to forward this information to appropriate county agencies for inclusion in the San Diego County Natural Resource Inventory (Section 2, Special Factors).

Recreation and Scenic Areas

1. As discussed in the Education and Recreation Facilities Element, the City will plan readily accessible recreation facilities close to population centers and education facilities by utilizing public open space while protecting natural sites of significant scenic or ecological value.
2. The City will encourage those governing bodies concerned to preserve areas under their jurisdiction which provide significant visual open space to Oceanside residents.

Identification, Evaluation & Analysis of Natural Resources in Oceanside

This chapter will give a basic analysis of the environmental resources found in Oceanside. It should be pointed out that several of the topics of discussion are currently under study and, therefore, conclusive evidence may not be available at this time. However, based on information collected to date, this report represents the most accurate survey possible. It is also noted, where applicable, that further information may be contained in other elements of the General Plan including land use, public safety and education and recreation facilities.

WATER

SOURCE

The Water and Sewer Department of the City of Oceanside operates the existing water system in Oceanside. Water is provided by the San Diego County Water Authority (SDCWA) through two connections to the Water Authority's first and second aqueducts. The existing water system consists of 6 reservoirs, 6 booster pump stations, 38 pressure regulators, two connections to SDCWA pipelines, and a network of transmission and distribution mains. One additional connection to the SDCWA pipeline No. 3 of the second aqueduct and new transmission mains are presently under construction. The water currently provided by the SDCWA first and second aqueducts has its source in the Colorado River. It is anticipated that, by the spring of 1976, a blend of Northern California and Colorado River waters will be available through the second aqueduct. The overall mineral

quality of the blended water will be significantly superior to the currently non-blended Colorado River water. By 1985, it is projected that blended water will be pumped through the first aqueduct as well.

An updated water master plan (March, 1975) was prepared for the City by James M. Montgomery, Consulting Engineers, Inc. It is assumed that this report and future amendments to it are included in this section by reference and are adopted as the overall water master plan for Oceanside. The water master plan should be adjusted with the implementation of the Tri-Agencies Water Transmission Pipeline. This pipeline is a proposed joint venture between the City of Oceanside, the Carlsbad Municipal Water District and the Vista Irrigation District. This project would mitigate some of the need to expand our own system to meet future demand in the City.

Oceanside has steadily increased its dependence on imported water and at present is almost 100 percent dependent on outside sources. Most of the local supply is located in the lower Mission Ground Water Basin. However, since more water has been extracted than was replaced through natural processes, salt water has progressively intruded eastward from the coast, and the City has abandoned these wells for water supply production. Water quality problems also exist in the upper Basin as a result of agricultural use and reuse. It is expected that local sources will greatly improve with implementation of reclamation, recharge and recovery projects which the City has undertaken as outlined below.

1. Wastewater Reclamation Project: The City has developed plans for a wastewater reclamation project, and the design has been completed for portions of the project which would provide irrigation water for agricultural use. Construction has already begun on certain phases of this project which would

provide a significant additional supply for the water system. The goal of the City is to completely reclaim wastewater within the City for utilization within the system.

2. Recharge and Recovery Project: This project is currently in the design stage. The basic principle is to recharge the groundwater basin along the San Luis Rey River floodplain with imported raw water (unfiltered) from SDCWA aqueducts or with local groundwater that has been demineralized. By utilizing the alluvial sediments of the floodplain as a filtration medium, groundwater stored in the basin will improve over a number of years, and the basin can be used as a treatment and seasonal storage facility.

Surface water is not considered a good source of local water. The City has a semi-arid, maritime climate and averages 10.7 inches of annual precipitation. Almost 74 percent of this total falls between December through March. The meager supply, poor quality and limitations because of water rights make it prohibitive to develop surface water as a significant source.

WATER BODIES AND WETLANDS

Lakes and reservoirs have a dual purpose. They may serve as natural catch basins to collect runoff from surrounding area and, to some extent, provide limited flood control. Perhaps the most significant role of lakes and reservoirs is for recreational activities, often serving as the center attraction in regional and local parks. Lakes and reservoirs can also be important fish and wildlife habitats and be aesthetically pleasing landscape features.

Most of the significant lakes and reservoirs in the area are planned to be either recreational and open space reservations

or have been set aside as significant ecological areas in previous reports. These include:

Guaajome Lake (part of Guaajome Regional Park)

The major attraction of the Guaajome Regional Park will be Guaajome Lake. Around Guaajome Lake are reeds, rushes and trees, which provide a welcome stopover for those birds traveling the Pacific Flyway, and a habitat for resident birds and other wildlife.

Calavera Lake

This proposed park site is entirely within the City of Carlsbad; its northerly boundary, however, is adjacent to land within the City of Oceanside. Consisting of approximately 250 acres, this site is described within the County report as follows: "Contains small reservoirs suitable for fishing and some boating. Topography suitable for picnicking, trails, mountain climbing and other day use facilities." It might also be added that, in its present state, it is one of the most attractive and secluded areas in the North County.

Whelan Lake

At present, this area houses a very unique eco-system consisting of such wildlife as deer, bobcats, coyotes, racoons, and badgers along with such raptorial birds as the white-tailed kite and golden eagle. A variety of shore birds, songbirds, and water fowl are also permanent inhabitants of the area. These birds and animals receive considerable attention from a large segment of the public, and the owner of a large portion of this land has expressed an interest in dedicating a portion as a wildlife preserve. At the grace of the owner, Whelan Lake

has become a seasonal sanctuary for Canadian geese. The owner of the land has been feeding the birds during their winter stay and has successfully diverted the yearly migration of a large number of these birds from Mexico or the Salton Sea.

Lake Henshaw

The largest reservoir in the county is Lake Henshaw on the San Luis Rey River, with a capacity of 50,000 acre feet. This reservoir is owned by the Vista Irrigation District and is operated primarily for water conservation purposes (see Public Safety Element).

Oceanside is located in the San Luis Rey drainage basin. The basin includes the entire 650-square mile watershed of the San Luis Rey River from the coastal divide in the Warner Mountains to the Pacific Ocean, a distance of 56 miles. Lake Henshaw controls the flow for the upper third of the river watershed. Major tributaries are Pilgrim, Keys and Pauma Creeks, and Moosa Canyon, downstream of Lake Henshaw; and the San Luis Rey River, the West Fork of the San Luis Rey River, and Agua Caliente and Buena Vista Creeks, upstream of Lake Henshaw.

The basin is typical of the county's western watersheds, with streams rising in the brush and forest lands of the interior mountains. The mountains slope gradually to the west and terminate in broad mesas near the ocean. Mountain vegetative cover is primarily sagebrush and chaparral. The major streams flow on gradually decreasing slopes through a series of small highland valleys, narrow canyons, and broader valleys, cut through the coastal hills and marine terraces, emerge into flat valleys, and enter the ocean through shallow estuaries and lagoons. Gully and sheet erosion of soil are serious problems which are aggravated by the loss of vegetative cover in the upper watersheds due to fire, cultivation, grading and construction activities.

Oceanside encompasses the lower reaches of the San Luis Rey River and almost the entire watershed of Loma Alta Creek. Buena Vista Creek is on the border between Oceanside and Carlsbad.

The watershed of the Loma Alta Creek is located within the city limits of Oceanside. The Creek is planned for channelization for almost its entire length because of the intensity of development in that area.

Buena Vista Creek is on the border between Carlsbad and Oceanside, and terminates in Buena Vista Lagoon. Because of the location and topography of the stream bed, most of resultant flood-prone areas are not within the city limits.

Lagoons and marshlands in this area are mostly the result of rising sea level and the subsequent filling of river valleys with sediments transported from inland streambeds. Lagoons typically have short lifespans when measured in geologic time, and they are continually developing, aging, destroying themselves, and rejuvenating as streams seek new courses to the ocean. The sandbars isolating lagoons from the ocean may only be seasonally breached by high tides or fresh water floods.

There are two ecologically significant lagoon/marshland areas in the City--Buena Vista Lagoon and the mouth of the San Luis Rey River.

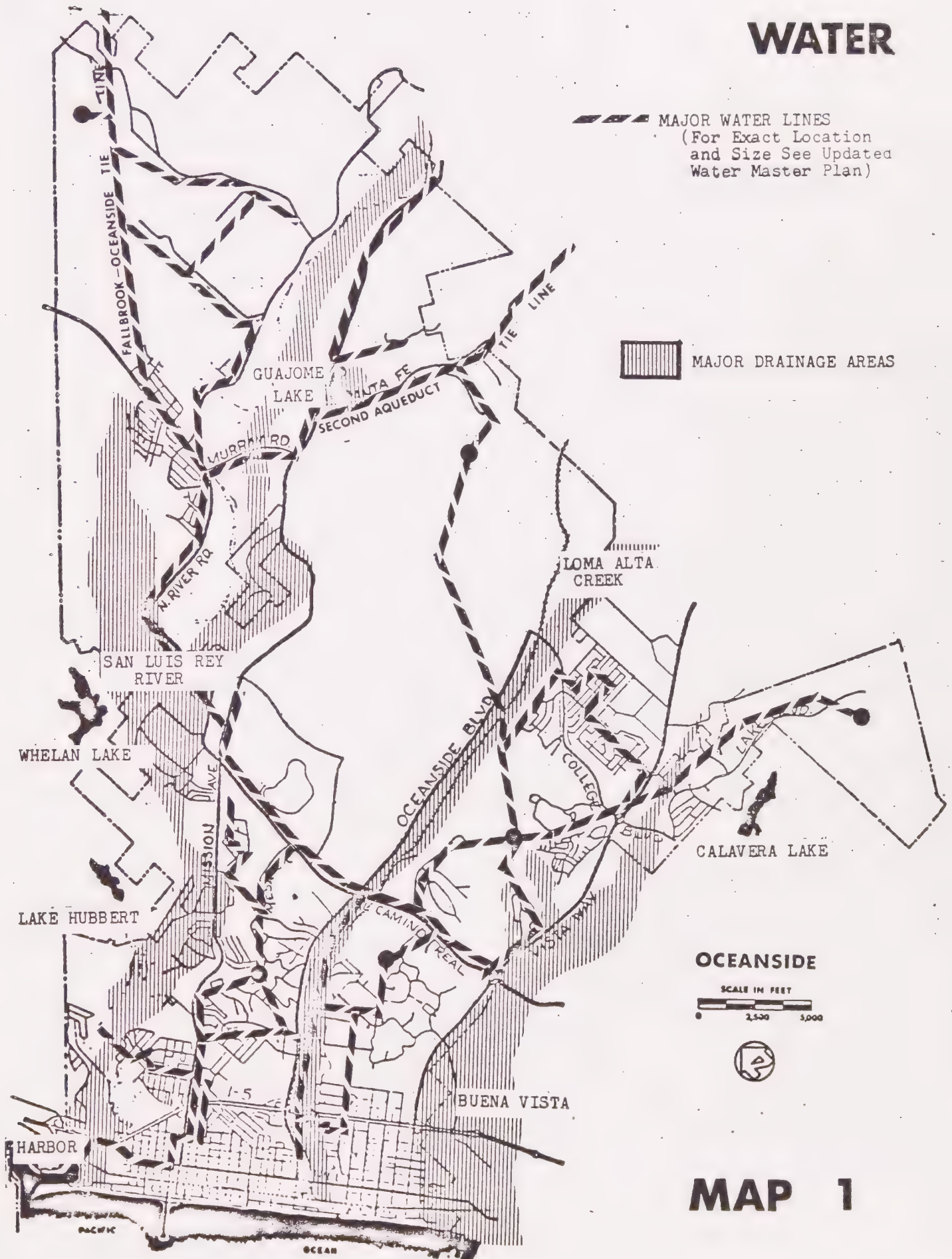
The Buena Vista Lagoon is one of the few remaining fresh water lagoons left on the Southern California coast. The approximately 200 acres is a stopover for thousands of birds and waterfowl migrating on the Pacific flyway. In addition, over 50 species of plants have been identified here as well as geologic and fossil remains from Pleistocene times. There is a great deal of interest in establishing the lagoon as a State park.

Structurally, Buena Vista Lagoon has resulted from silt deposits from Buena Vista Creek at its upper end; at its lower end tides, wave action, and the north-south littoral current have formed dunes and spits as barriers from time to time, alternating with free exchange between ocean and creek. The results have been a brackish lagoon.

The mouth of the San Luis Rey River has been identified as a major natural resource area of regional significance by the San Diego Comprehensive Planning Organization. It includes the mouth of the river and its terminal closed fresh water lagoon of about 10 acres and a marsh area within the river bed proper. The lagoon supports a moderate population of fresh water game fish including largemouth bass, bluegill and sunfish and mosquito fish. Freshwater crayfish are abundant and are an important food source for fish and birds. Over 55 species of birds have been recorded, 10 of which nest in the area. The plant life varies from brackish marsh species such as salt grass, pickle-weed, and brass buttons to abundant species in the lagoon which are an important food source for waterfowl. In all, 15 important plant association groups have been identified. Seepage of ocean water into both lagoons still occurs, although not to the extent it has in the past.

Further discussion of the above water bodies and wetlands may be found in other sections of the Environmental Resource Management Element including sections dealing with (1) flood control (water), (2) soils and drainage, (3) vegetation and wildlife habitats and (4) recreation areas.

WATER



FLOOD CONTROL

Flood-prone areas are identified by mapping the floodplain. The floodplain is delineated by the 100-year flood level. That is to say that all the area found within the 100-year flood encroachment line has at least a one percent chance of flooding within any given year. The floodway is defined as the streambed and its overflow portion of the floodplain to which encroachment can be permitted without causing more than a one foot (1'-0") rise during the 100-year frequency at peak flow. These areas represent the location where most of the water will flow at rapid velocities.

Floodplain mapping is a complicated procedure and is done by the hydrology section of the County Department of Sanitation and Flood Control in conjunction with the U. S. Corps of Engineers and the State Department of Water Resources. The importance of accurate mapping cannot be overemphasized since it has a direct relation to development and land use. Construction is prohibited within the floodway and restricted in the floodplain fringe (within the floodplain but outside the floodway) by requiring flood-proofing measures for all structures.

The City has adopted an overlying flood plain zone (see appendix) which would restrict construction within designated floodplain areas. With the adoption of a designated floodway, construction will be entirely prohibited within these boundaries. This ordinance is intended to limit damage caused by flooding by restricting development in flood-prone areas.

A study has been conducted by the U. S. Corps of Engineers on flood control in the San Luis Rey valley. They recommended channel improvements which would be approximately 7.2 miles long.

Their recommendations include:

- "(1) An earth-bottom trapezoidal channel about 5.7 miles long from Murray Road to about 1 mile upstream from U. S. Highway No. 101;
- (2) About 1.5 miles of channel grading, which in general would be limited to the removal of spoil banks from a point 1 mile upstream from U. S. Highway 101 through the 'Narrows' section, to the ocean;
- (3) About 800 feet of stone-revetted levee on the south bank of the San Luis Rey River from the Santa Fe Railroad to the ocean."⁴

Present City policy is to require property owners with land adjacent to the floodway to make reasonable channel improvements concurrent with development of their land. An application for federal assistance to construct other improvements is also under consideration.

The entire length of Loma Alta Creek will be channelized due to the intensity of land use in this area. The design of the channel is based on containing the flood flows for the 25-year storm level. Some of the improvements are already constructed. Crosssections and alignments have already been determined.

The Buena Vista Creek lies on the border between Carlsbad and Oceanside. Maintenance of improved portions of Buena Vista Creek Channel is handled jointly with Carlsbad and San Diego County. Because of the topography, most of the floodplain falls outside the city limits of Oceanside.

Other measures to mitigate flooding hazards can be found in the section of this Element dealing with soils erosion. Protection of the watershed and a reduced flooding hazard will result from effective land use control and proper engineering practices.

⁴U. S. Army Corps of Engineers, Environmental Statement to Accompany Review Report for Flood Control, San Luis Rey River, San Diego County, California, May, 1970.

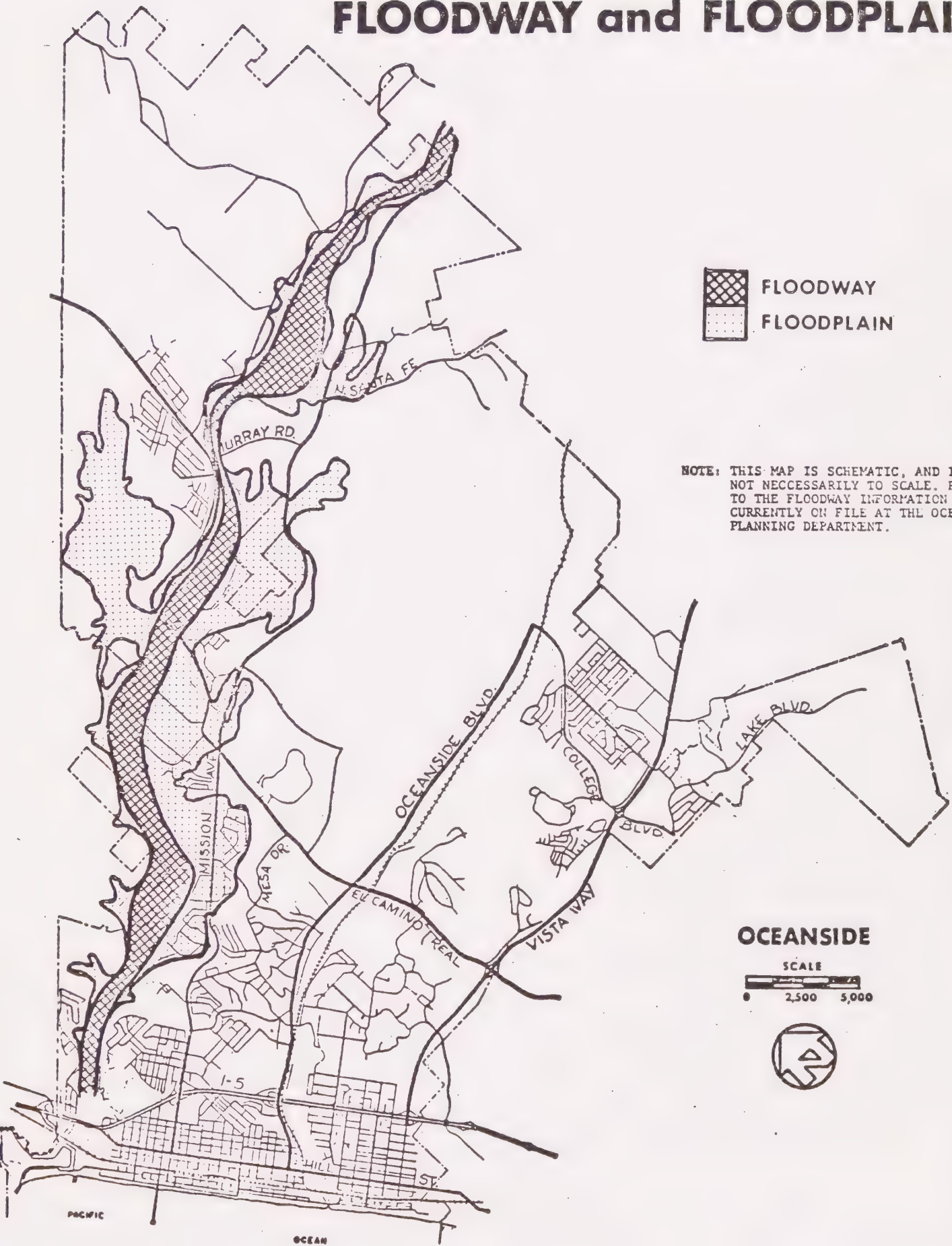
The Public Safety Element also addresses this subject in relation to geological, seismic, and other natural hazards.

NATIONAL FLOOD INSURANCE PROGRAM

The National Flood Insurance Program was developed as a result of the Flood Protection Disaster Act of 1973. Federal financial assistance or loans by federally supervised lending institutions in connection with properties located in flood-prone areas will be prohibited unless the community is participating in the Flood Insurance Program. Flood-prone areas are all areas within the 100-year flood level. Basically, the community is required to enact and enforce ordinances that will restrict construction of new buildings in flood hazard areas (floodplain), guide development of proposed construction away from threatened areas and improve long range management and use of flood-prone areas.

Oceanside has met these requirements and will participate in the National Flood Insurance Program. However, decisions about exact location of the floodway are pending discussions with the federal government, county, U. S. Corps of Engineers and local officials. Delineation of the floodway is currently under study by these agencies.

FLOODWAY and FLOODPLAIN



SOILS, EROSION and DRAINAGE

Erosion is a normal and inevitable geologic process whereby earth materials are loosened, worn away, decomposed or dissolved, removed from one place and transported to another, sometimes many miles from their source. Precipitation, running water, waves and winds are all agents of erosion. Ordinarily, erosion proceeds so slowly as to be imperceptible, but when the natural equilibrium of the environment is changed, the rate of erosion can be greatly accelerated. This can create aesthetic as well as engineering problems, although not necessarily posing a threat to life or property.

There are four major erosion related problems in Oceanside.⁵
They are:

- (1) Accelerated erosion in soft rocks of the La Jolla Group
- (2) Rapid weathering of granitic rocks
- (3) Siltation of the lagoons
- (4) Beach erosion

The soft rocks of the La Jolla Group are fine-grained, friable and poorly cemented. These characteristics made them highly susceptible to accelerated erosion. In areas where overlying soils and vegetation have been removed, such as in road cuts and excavations, and where these rocks have been exposed to high intensity rainfalls, a "badlands" topography is characterized by the formation of an intricate maze of narrow ravines, and sharp crests, and pinnacles. Where La Jolla Group rocks have been used as fill material, and vegetal cover is absent or

⁵Burkland and Associates, Geotechnical Investigation for General Plan Revisions, August 1974.

inadequate, they have also been subject to accelerated erosion and the development of badlands characteristics.

The San Marcos Gabbro and Undifferentiated Tonalite are granitic rocks which are generally stable and resistant to weathering. However, in the highly fractured areas characteristic of these formation, groundwater collects in the fractures and interacts with certain minerals in the rock causing rapid decomposition and disintegration to very great depths. These residual soils are predominantly sandy materials subject to rapid erosion.

Eroded materials are transported through natural and artificial drainage channels, into stream channels and finally into the lagoons. Silt carried into the lagoons remains suspended in the water for some time where it constitutes a pollutant, altering the normal balance of plant and animal life. It eventually settles to the bottom where it alters bottom contours and decreases the depth of the water. During field reconnaissance by Burkland & Associates, they observed that erosion and siltation control measures were lacking in areas under development or recently developed. At present, there are no regulatory controls over the problems of erosion and siltation. If the lagoons are to be preserved, a comprehensive program of erosion and siltation control would have to be undertaken.

RECOMMENDATIONS TO CURB EROSION

There are several measures which can be taken to minimize the problems of erosion and siltation. Investigation and evaluation of currently affected areas and proposed building and development sites would be necessary to decide which measure(s) would be appropriate to each situation. The following measures are available to reduce the rates and effects of erosion and siltation:

1. Keep grading to a minimum, leave vegetation and soils undisturbed wherever possible.
2. Plant bare slopes and cleared areas with appropriate vegetation.
3. Chemically treat soils to increase stability and resistance to erosion.
4. Install retaining structures where appropriate.
5. Construct drainage systems to direct and control rate of surface runoff.
6. Construct silt traps and settling basins in drainage systems.
7. Construct weirs and check dams on streams.

GRADING AND EXCAVATIONS

The rocks and soils of Oceanside can be divided into two distinct groups on the basis of their excavation characteristics. The first group occurs in about 60 percent of the area and consists of the La Jolla Group, Linda Vista Formation, Quaternary alluvium, and beach and dune sand. The second group occurs in the remaining 40 percent of the area and consists of hard igneous and metamorphic rocks and their residual soils.

All the rocks and soils in the first group can be excavated with ordinary earth moving equipment, and they lend themselves readily to mass grading projects. The only significant geotechnical problem in this group is the necessity of providing appropriate drainage structures for groundwater and surface water. Slope stability is a relatively minor problem in excavations in this group.

The La Jolla Group rocks and soils are susceptible to accelerated erosion, therefore, surface water should be diverted away from cut and fill slopes in these materials. Silt traps

and settling basins should be provided downslope of grading and construction in the La Jolla Group. In areas of claystone beds, provision may have to be made for drainage of groundwater.

. It has been customary engineering practice to strip shallow Linda Vista terrace deposits during grading, thereby exposing the underlying La Jolla Group rocks. In such cases, the precautions indicated above for control of drainage and erosion would apply.

In the alluvium, groundwater levels are within a few feet of the surface in the lower alluvial valleys and lagoon areas. In some places, shoring and other support techniques would be needed during excavation. Drainage facilities would have to be provided for excavation and construction in those areas. Provision would have to be made for the control of surface water, including the possibility of flooding in the lower alluvial valleys. The soils in the lower alluvial valleys and lagoon areas are compressible and subject to settlement; any fills placed over them would also be subject to settlement.

Excavations in beach and dune sands would require shoring. These materials are compressible and subject to settlement, as would be any fills placed over them.






The rocks of the second group are generally hard and require ripping and blasting to excavate. Trenching for utility lines is difficult and costly, and mass grading is usually not feasible. In some areas, particularly in the granitic rocks, weathering has decomposed these rocks into soils for a considerable distance below the surface. Provision may have to be made for drainage of groundwater and springs usually associated with these soils. The existence of these soils may create stability problems in cut slopes. Except where deeply weathered soils occur, steep slopes would generally be stable, as long as naturally occurring planes of weakness in geologic structures are not undercut. Boulders are very common in areas of deeply weathered soils. They would require blasting for removal during excavation.

In all cases, investigations should be conducted by engineering geologists and soil and foundations engineers at individual development sites prior to excavation.

Oceanside has enacted a grading ordinance that will mitigate the erosion of graded and excavated areas with proper enforcement. This ordinance sets minimum standards regulating excavation, grading and embankment of land within the City of Oceanside. It has also been recommended in the Public Safety Element of the General Plan that Oceanside develop a hillside ordinance in areas where slope stability is a question.

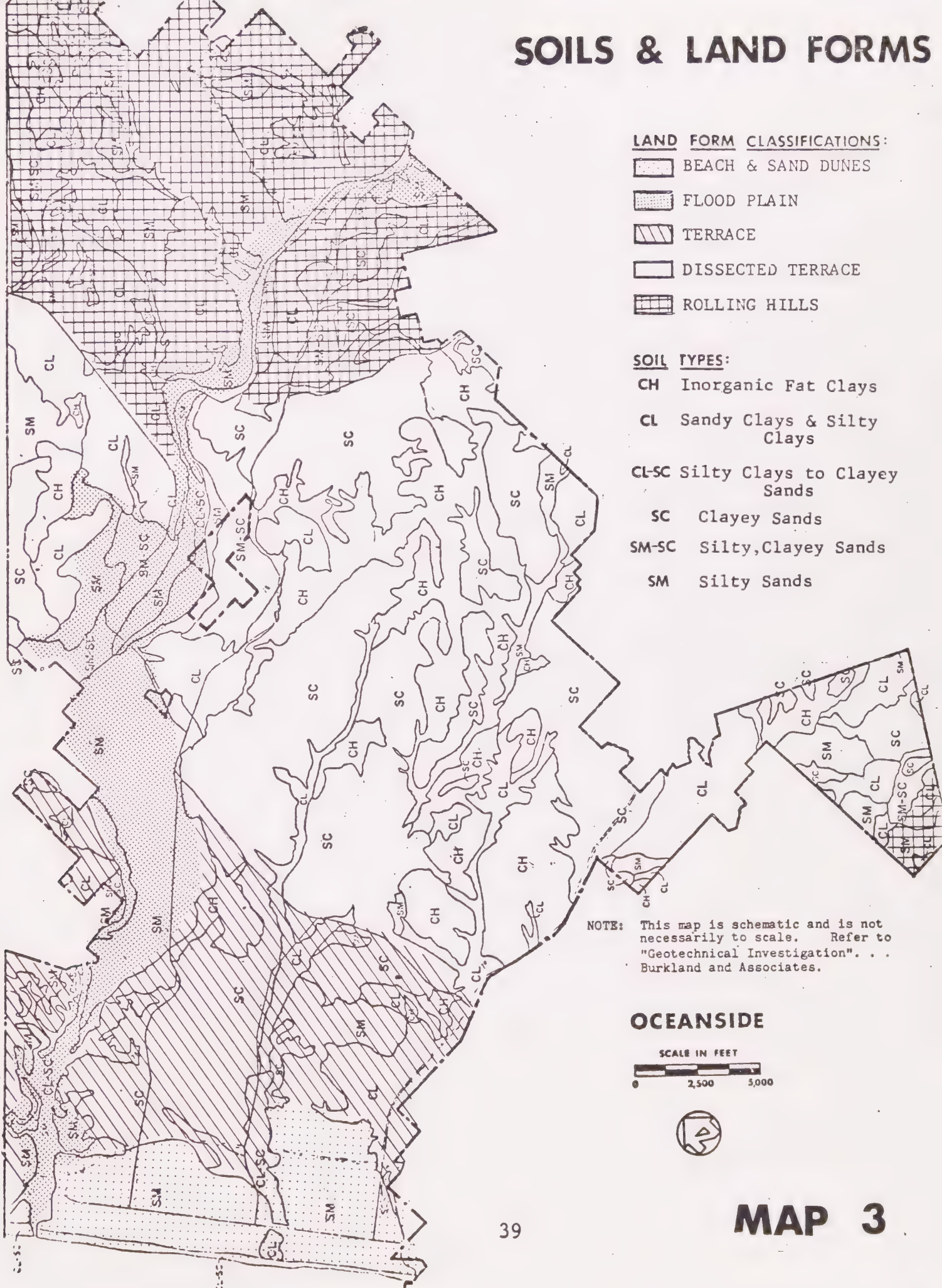
SOILS & LAND FORMS

LAND FORM CLASSIFICATIONS:

-  BEACH & SAND DUNES
-  FLOOD PLAIN
-  TERRACE
-  DISSECTED TERRACE
-  ROLLING HILLS

SOIL TYPES:

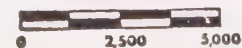
- CH Inorganic Fat Clays
- CL Sandy Clays & Silty Clays
- CL-SC Silty Clays to Clayey Sands
- SC Clayey Sands
- SM-SC Silty, Clayey Sands
- SM Silty Sands



NOTE: This map is schematic and is not necessarily to scale. Refer to "Geotechnical Investigation"... Burkland and Associates.

OCEANSIDE

SCALE IN FEET



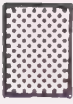
MAP 3

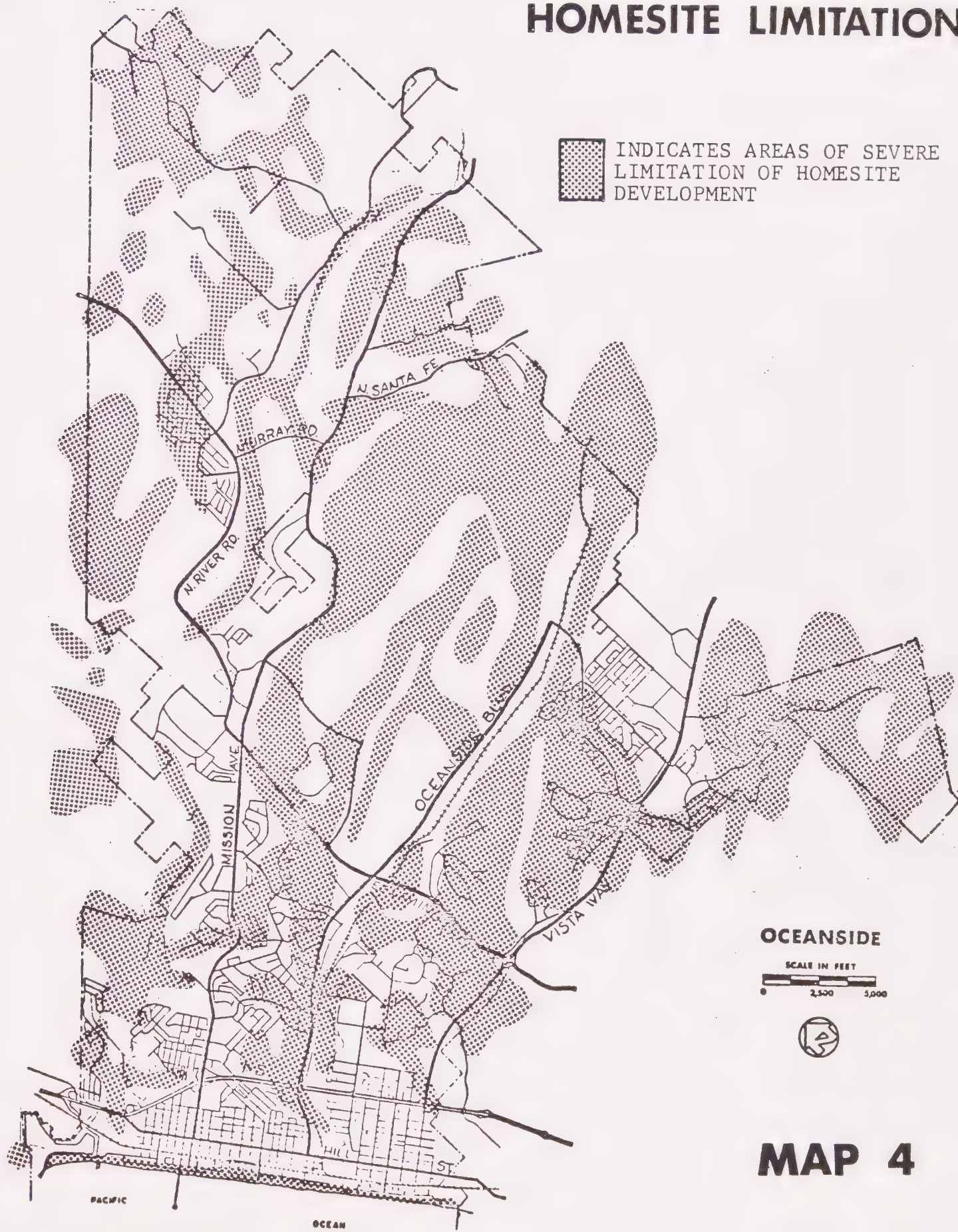
HOMESITE LIMITATIONS

The suitability of land for homesite development depends on a number of natural criteria including slope, drainage, erosion hazard, shrink-swell behavior and rockiness. The extent to which these factors exist in an adverse manner determines the difficulty that will be encountered in developing a site. Each of these factors can be overcome by good design, engineering and sound construction practices. However, when these factors exist in combination and in their most adverse form, the costs of designing and construction to overcome them becomes prohibitive. In many cases, such severe limitations will increase the cost to the City for installation of urban services.

Those areas shown on Map 4 have been rated as possessing severe limitations to homesite development. The rating system used is complicated. Briefly, after evaluation of all the factors involved, these areas have been determined to possess limitations which can only be overcome by superior design, engineering, and construction practices, thereby greatly increasing the costs of development.

HOMESITE LIMITATION

 INDICATES AREAS OF SEVERE
LIMITATION OF HOMESITE
DEVELOPMENT



OCEANSIDE

SCALE IN FEET
0 2,500 5,000



MAP 4

COASTAL PRESERVATION

Oceanside has approximately three miles of frontage on the Pacific Ocean. The shoreline beach area is one of the City's most valuable assets in terms of recreational amenities and tourist inducements.

The beach is a dynamic geological phenomenon. Wave action is constantly shifting the particles of sand to new positions as well as depositing sand particles carried from other locations. When a shoreline is in equilibrium, the wave action will replace as much sand as it picks up, thereby keeping the same volume of sand on the beach at all times.

However, construction of barriers will modify this wave action, and the transportation of sand particles will be interrupted. Sand particles above the barrier will be held back while the erosive wave action below the barrier will continue to deplete the sands.

Breakwaters and groins are the type of barriers that will interrupt this natural beach restoration process. With the construction of Camp Pendleton's breakwater in 1942, the beach area up coast eventually gained approximately 40 acres while Oceanside's beach consistently lost about 40 acres of area.

Other factors contributing to the modification of wave action locally are:

- (1) A sheltered harbor entrance.
- (2) Sea floor depressions such as a dredged channel and offshore canyons.
- (3) Screens, such as clustered pilings under the pier.
- (4) Offshore reefs and sills.

There are currently three alternatives under consideration by the U. S. Corps of Engineers to mitigate the beach erosion

problem in Oceanside. .

- (1) Periodic replenishment (current and short range solution): Sand from Camp Pendleton breakwater area and harbor dredgings is transported via a sand conservation pipe to fill in and maintain a minimum beach width. This usually occurs in the fall and winter months.
- (2) Continuous groin field: Construct groins similar to ones at harbor entrance at approximately 1,000' intervals along the beach (generally considered an inferior solution in this instance).
- (3) Submerged offshore sills ("reefs") (superior long range solution): Reduces incoming wave energy and therefore cuts erosive action of waves. This alternative would be beneficial and is currently proposed as the most appropriate course of action.

These alternatives will be evaluated in terms of planned development of the beach area, and the best alternatives should be utilized and combined to produce optimum beach characteristics for the particular planned uses. Until then, periodic replenishment by the federal government will continue to be used as the means of conserving this resource.

MINERALS

There are two major areas of mineral deposits within the City. One of these is the San Luis Rey River basin which contains landfill and beach sand (non-construction quality) and construction quality sand suitable for concrete and plaster. The other significant deposit consists of silica sand, primarily used in glass manufacturing.

The County of San Diego has undertaken a River Sand Resource Study (June 1974). In its report, the sand deposits in the San Luis Rey River Basin comprise 73.5 percent of total available deposits accessible to sand producers. This figure takes in the North County Market Area, of which Oceanside is a part. Presently, there is one sand producer operating in the floodplain in Oceanside. However, most of the sand deposits are found in the urbanized area within the City of Oceanside and these deposits are classified as "unavailable" in the County study. The study concludes that

"... even though it contains a great quantity of material, the San Luis Rey River probably does not have the potential for supplying an increasingly large percentage of the County's sand needs for many years unless a cheaper means of transportation than trucking becomes available."

Currently, the more significant mineral extraction operation is found along El Camino Real north of Oceanside Boulevard. Here, silica sand is being extracted by the Crystal Silica Company.

The sand from these deposits has a variety of uses in construction and industry; the chief use being in glass manufacturing. The operation is under the control of conditional use permits issued by the City, which include several conditions for the operation, maintenance and restoration of the area. Periodic review and inspection of the operation assures proper

safeguards for the management of these resources. Plans for re- .
use of the land after completion of the extraction are not com-
plete, but alternatives include recreation areas and possibly
industrial or homesite development at some point in the future.

SAND DEPOSITS

ALLUVIUM



Probable Construction
Quality Sand

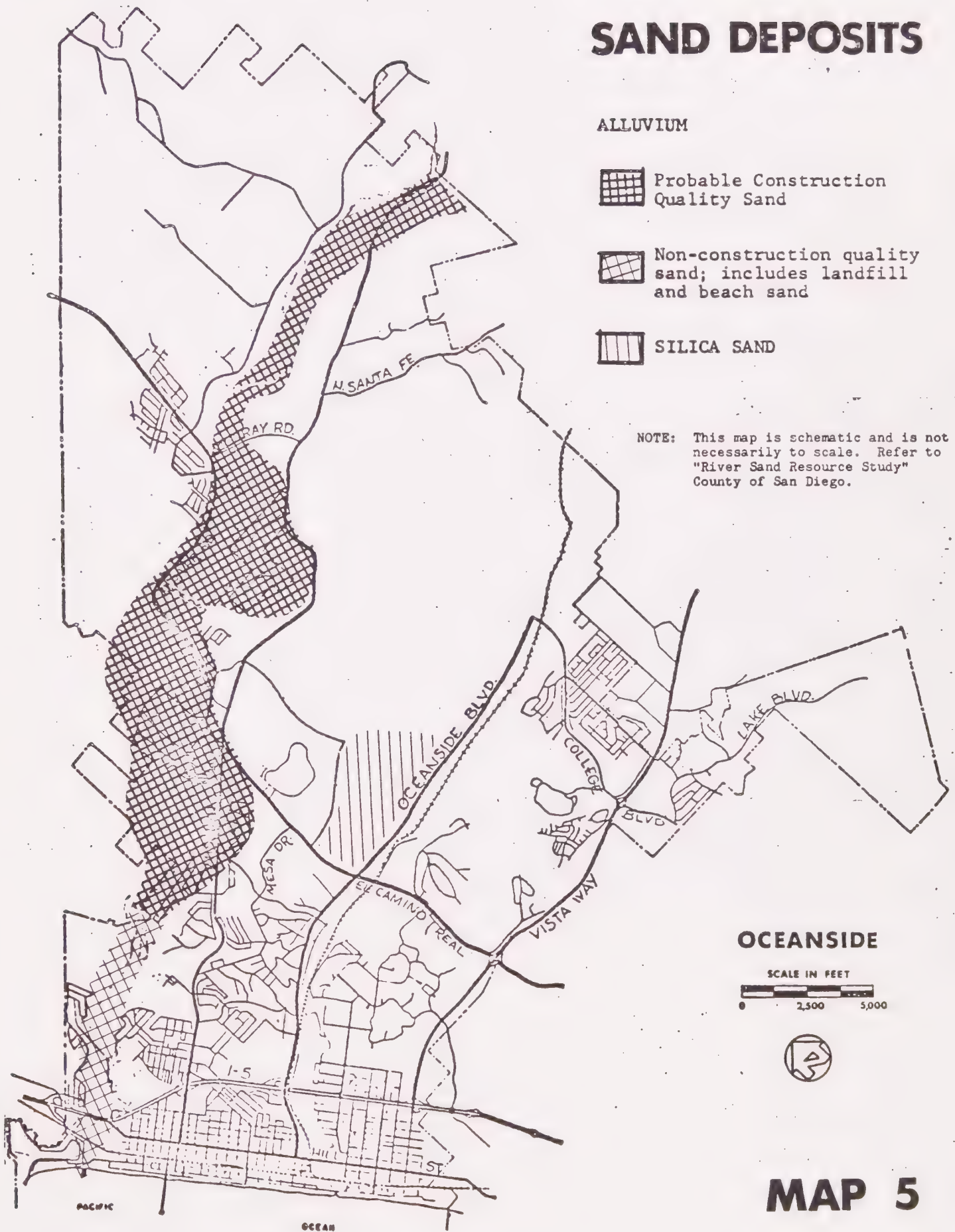


Non-construction quality
sand; includes landfill
and beach sand



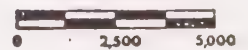
SILICA SAND

NOTE: This map is schematic and is not necessarily to scale. Refer to "River Sand Resource Study" County of San Diego.



OCEANSIDE

SCALE IN FEET



MAP 5

· VEGETATION & WILDLIFE HABITATS

There are several areas within or adjacent to the City limits that have been recognized as significant areas with regard to vegetation and wildlife habitats. These areas are generally found in the wetland regions and, in particular, along the San Luis Rey River and the Buena Vista Lagoon, and have been discussed earlier in this element.

The California Environmental Goals and Policies identify the Buena Vista Lagoon as both a significant scientific and educational resource and a critical wildlife habitat. Under the California Protected Waterways Plan, the Buena Vista Lagoon has been designated an extraordinary scenic, fishery, wildlife, and recreation waterway. The San Luis Rey River marsh has been pointed out as waterway with significant value in Southern California. The California Ocean Area Plan gives Buena Vista Lagoon a high priority rating for coastal estuarine and wetland areas. The San Diego County Regional Park Implementation Study recommends Buena Vista Lagoon as a regional park.

Partial lists of plant classifications and wildlife that have been noted in the area are available in the Planning Dept. Special attention should be paid to these habitats and, especially, the known habitats of endangered species, in the evaluation of Environmental Impact Statements. It should be remembered that once these habitats are modified or destroyed, it is very difficult, and often impossible, to restore these areas of delicate natural balance.

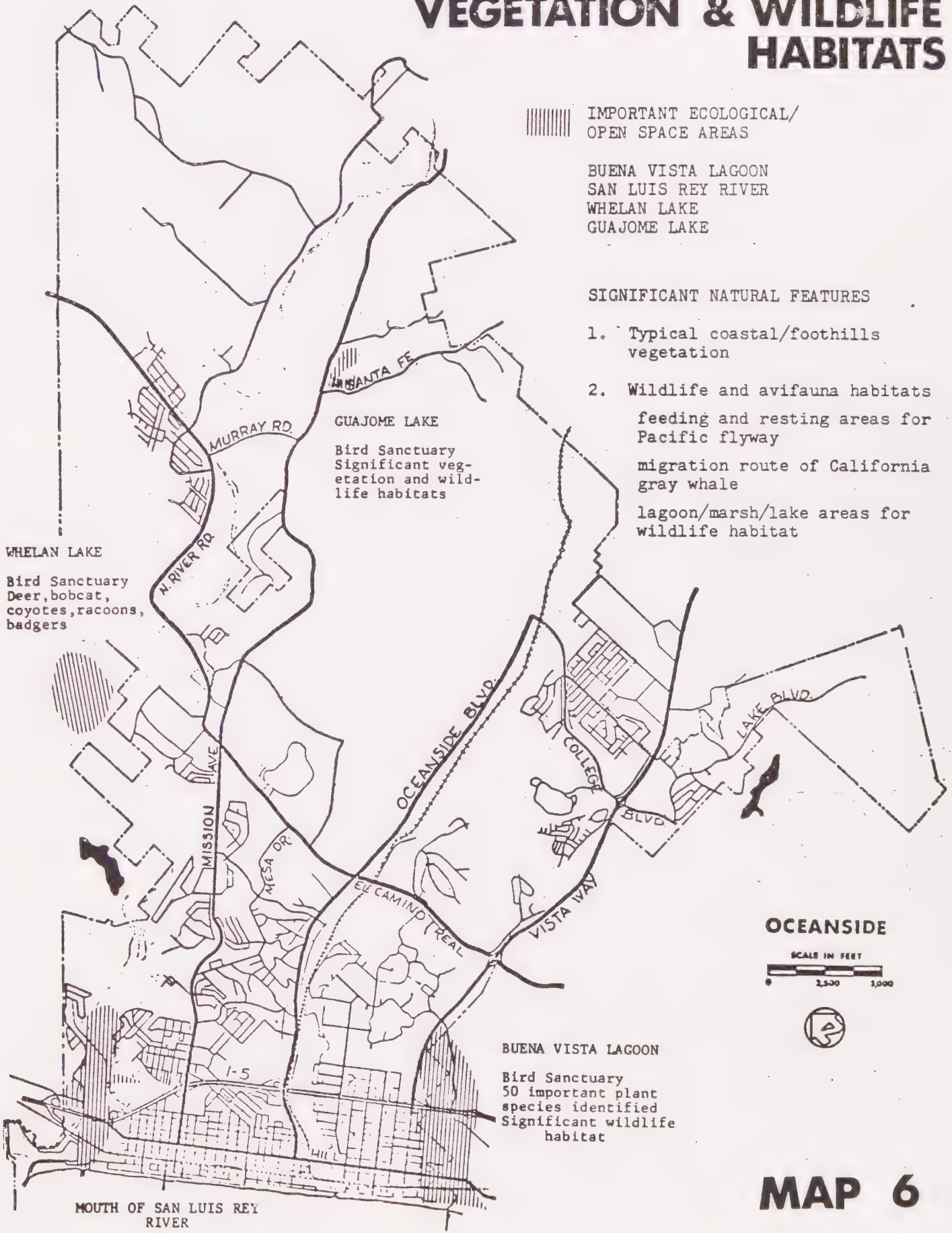
VEGETATION & WILDLIFE HABITATS

||||| IMPORTANT ECOLOGICAL/
OPEN SPACE AREAS

BUENA VISTA LAGOON
SAN LUIS REY RIVER
WHELAN LAKE
GUAJOME LAKE

SIGNIFICANT NATURAL FEATURES

1. Typical coastal/foothills vegetation
2. Wildlife and avifauna habitats
feeding and resting areas for Pacific flyway
migration route of California gray whale
lagoon/marsh/lake areas for wildlife habitat



15 important plant species identified
Freshwater game fish
Resting area on Pacific Flyway

AIR QUALITY

Oceanside falls within the San Diego Air Basin and, therefore, is within the jurisdiction of the San Diego County Air Pollution Control Board. A major regional planning effort is underway by the San Diego Air Quality Planning Team. This team is comprised of representatives from the San Diego County Air Pollution Control Board, Comprehensive Planning Organization (CPO), and the California Department of Transportation (CALTRANS). General information and research findings of the Planning Team are made available to local agencies for review and reference.

The San Diego Air Quality Planning Team will be responsible for developing a Regional Air Quality Strategy (RAQS) which will satisfy the Federal and State air quality requirements. Immediate Federal requirements have been satisfied with the preparation of the Indirect Source Review and Parking Management Plan.

Oceanside has generally shown the same trends in air quality as the rest of the county. The major trends since 1960 include the following:

- (1) Lower oxident levels (due to improved auto emission controls).
- (2) Slight decrease in oxides of nitrogen.
- (3) Little or no change in nitrogen dioxide, sulfur dioxide and hydrocarbons.
- (4) Decrease in carbon monoxide levels (probably due to favorable weather conditions).

It should be understood that levels of air pollution vary with overall climate, localized weather conditions and other factors, including pollution from outside sources. There is a monitoring station located in Oceanside that supplies data to the San Diego Air Quality Control District.

Mining and excavation, industry and development projects are subject to regulations and controls of the San Diego Air

Pollution Control Board and should exercise dust controls and noise abatement measures as necessary to protect the health and well being of the surrounding community.

AGRICULTURAL RESOURCES

Lands capable of supporting agriculture operations are readily identified by a soils interpretation study. Agriculture can be viewed both as a natural resource and as a land use capable of supporting the City's economic base. These arguments, however, have not always withstood economic and political pressures for development. Recently, agriculture has been viewed as a means of shaping and separating conflicting land uses and of relieving government of the responsibility of extending expensive urban services.

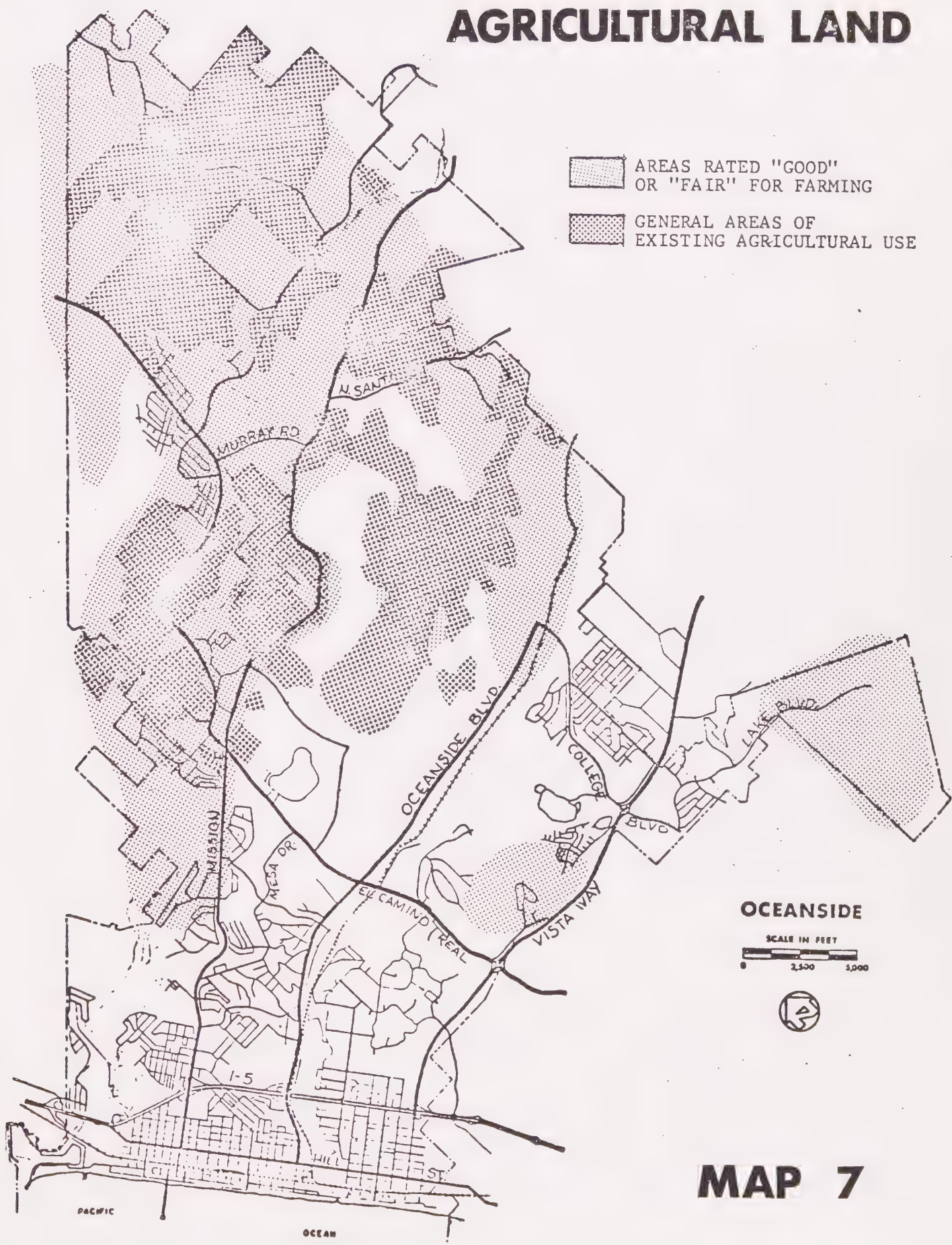
The agriculture industry in Oceanside is valued at approximately \$12 million annually. This accounts for approximately 10 percent of San Diego County's agricultural output. Major crops include avocados, tomatoes, citrus and nursery stock.

There are two primary areas of significant agricultural production in the City. The first, Morro Hills agricultural area, is generally north of Mission Avenue and east of Vandergrift Boulevard. Avocados are the primary crop here and production contributes to the North County output of over 90 percent of all avocados in California.⁶ The second area is the Rancho del Oro property between Mission Avenue and Oceanside Boulevard. Originally planned for subdivision and housing development, planting began in 1967 and is now expected to continue for the foreseeable future. The ranch contains the largest lime grove in California, more than 10 percent of the State's total lime plantings, plus significant numbers of lemons, oranges, tangelos and avocados. In all, there are over 41,500 trees on the 2,200 acres. The owners of the ranch are also working with the University of California at Riverside Extension Service on a biological pest control project.⁷

⁶City of Oceanside, California, Planning Department, Environmental Statement (Oceanside, August, 1972), p. 19.

⁷Larry Freeman, Huge Lime Groves Latest Rancho del Oro Addition, San Diego Union, August 12, 1973.

AGRICULTURAL LAND



CULTURAL SITES

This area is rich in historical material. Prominent among these features are three sites in particular--the Mission San Luis Rey de Francia, the Rancho Guajome and the Grave of Francisco de Ulloa.

MISSION SAN LUIS REY

Mission San Luis Rey de Francia, four river miles upstream from the ocean, was founded in 1798 by Padre Lasuen. It brought civilization and culture to the San Luis Rey River Valley. Mission San Luis Rey, the eighteenth of 21 California missions, was named after King Louis IX of France. This mission is known as the "King of the Missions" because it was the largest and one of the most beautiful architecturally. The mission is actively functioning - daily tours are conducted and services are held Sundays. The mission is on a mesa and is not subject to flooding. The oldest living and one of the first pepper trees (Shinus molle) planted in California is located adjacent to the mission. This tree, from Peru, planted in 1830, is not in the floodplain. The sunken garden of the Mission San Luis Rey is one-half mile south of the mission. An Indian-laundry area made of adobe tile was discovered when a canal was uncovered during the restoration of the gardens. The laundry area was covered by silt during flooding over a century ago.

RANCHO GUAJOME

Rancho Guajome Adobe, located off North Santa Fe Road, southeast of Guajome Lake, is a handsome old structure, currently in disrepair. The large ranch house, around a central courtyard, has an impressive "portale" built with a long row of arches. The original owners were among the first settlers of this valley. It is typical of the early California architectural style.

GRAVE OF FRANCISCO DE ULLOA

. On June 30, 1540, two years before Juan Rodriguez Cabrillo discovered San Diego Bay, Francisco de Ulloa sighted land at the mouth of the San Luis Rey River. Later that summer, the Spaniards disembarked and explored the floor of San Luis Rey Valley.

Francisco de Ulloa and several of his men became ill during this expedition and died. His grave has been discovered recently and efforts to preserve the site are underway.

The San Diego Museum of Man has identified archaeological sites in the Fire Mountain area, near San Francisco Peak and in the Guajome Lake region. The museum also indicates that the survey of Oceanside is incomplete and that identification and excavation of present and future sites should be done by trained, scientific personnel. Precautions should be taken to prevent vandalism and destruction of the sites by improper excavation.

RECREATION, SCENIC & OPEN SPACE LAND

On the following page are the park and recreation standards adopted by the City of Oceanside in 1974 with adoption of the Education and Recreations Facilities Element. These standards attempt to distinguish between various sizes and functions of parks and the geographic areas they will serve. To determine how well the City is meeting these standards, it was necessary to identify all the recreation areas in the City (public and privately owned) by function and compute the total acreage serving each function. By City standards, the total area exceeds the minimum adopted recreational standards.

The County of San Diego and the Comprehensive Planning Organization recommend 15 acres of local parkland and 15 acres of regional parkland for every 1,000 people. Almost all regional parks in San Diego County are within the recommended one-hour driving time of Oceanside; therefore, there should be no shortage of regional parks available for City residents for at least the next 20 years, based on these standards. Oceanside is fortunate to have one of these regional parks within the City and one proposed regional park (Calaveras) directly adjacent; and as these parks develop, they will be serving more and more as community parks for City residents. These parks plus the park dedication of 5 acres per 1,000 people required by the City Subdivision Ordinance will satisfy the need for local recreation areas based on city, county and CPO standards.

INVENTORY OF PRESENT OPEN SPACE AND SCENIC AREAS

Map 8 presents an inventory of areas which serve as open space and which are currently dedicated or restricted in some manner to ensure their preservation. These areas include parks, schools with their adjacent playgrounds and athletic fields, golf courses, cemeteries, churches with extensive grounds,

RECREATION STANDARDS

RECREATION STANDARDS for CITY of OCEANSIDE

Classification					
Criteria	Playlots & Vest Pocket Parks	Neighborhood Parks	Community Parks	Regional Parks	Special Areas & Facilities
Acres/1000 people	0-5	2-10	2-10	15-18	Not Applicable
Size Range	2,500 sq.ft. to 5 acres	Min. 5 acres, Optimum 10-30 acres without school. 5-25 acres with school. No max- imum size.	Optimum 20-100 acres. No maximum size.	200+ acres	Includes parkways, beaches, green belts and trails, plazas, historical sites, floodplains, downtown malls, and small parks, tree lawns, etc.
Population Served	500-2500	2000-5000 optimum 10,000 maximum	5000 minimum 10,000-25,000 optimum 50,000 maximum	Entire County	
Service Radius	Sub-neighborhood	1/4-3/9 mi. optimum 1 mi. maximum in rural areas	1/2 - 3 miles	Within 1 hour driving time	
Desirable facilities	playground playfield	playground ballfield basketball courts playfield	Tennis Courts lighted ballfield swimming pool meeting rooms	Natural areas golf courses	

TABLE 1

and visual elements such as the ocean and Camp Pendleton. For the most part, these areas are in the developed portions of the City. Two very notable exceptions are the new municipal golf course and Guajome Regional Park. It is to the City's credit that both of these projects will be preserved as open space before intensive urban development occurs in their respective areas. If the City wishes to maintain the rural-residential quality that exists in the outlying areas of Oceanside, further steps will have to be taken to ensure preservation of open space lands before development occurs.

EXISTING OPEN SPACE

I. Public Owned Recreation Areas

- | | |
|-----------------------------|---------------------------|
| 1. Beach | 9. John Landes Park |
| 2. Pool and Playground | 10. Libby Lake |
| 3. Ball fields | 11. Golf Course |
| 4. Oceanside Community Park | 12. Valley Park |
| 5. Joe Balderrama Park | 13. Fire Mtn. Playground |
| 6. Buddy Todd Park | 14. Guajome Regional Park |
| 7. Capistrano Park | 15. Harbor |
| 8. Rotary Park | 16. Water Recharge Areas |
| | 17. N. River Road Park |

II. Other Recreational Areas

- 21. Oceana Golf Course
- 22. El Camino Country Club
- 23. Beach
- 24. Henie Hills Recreation Area

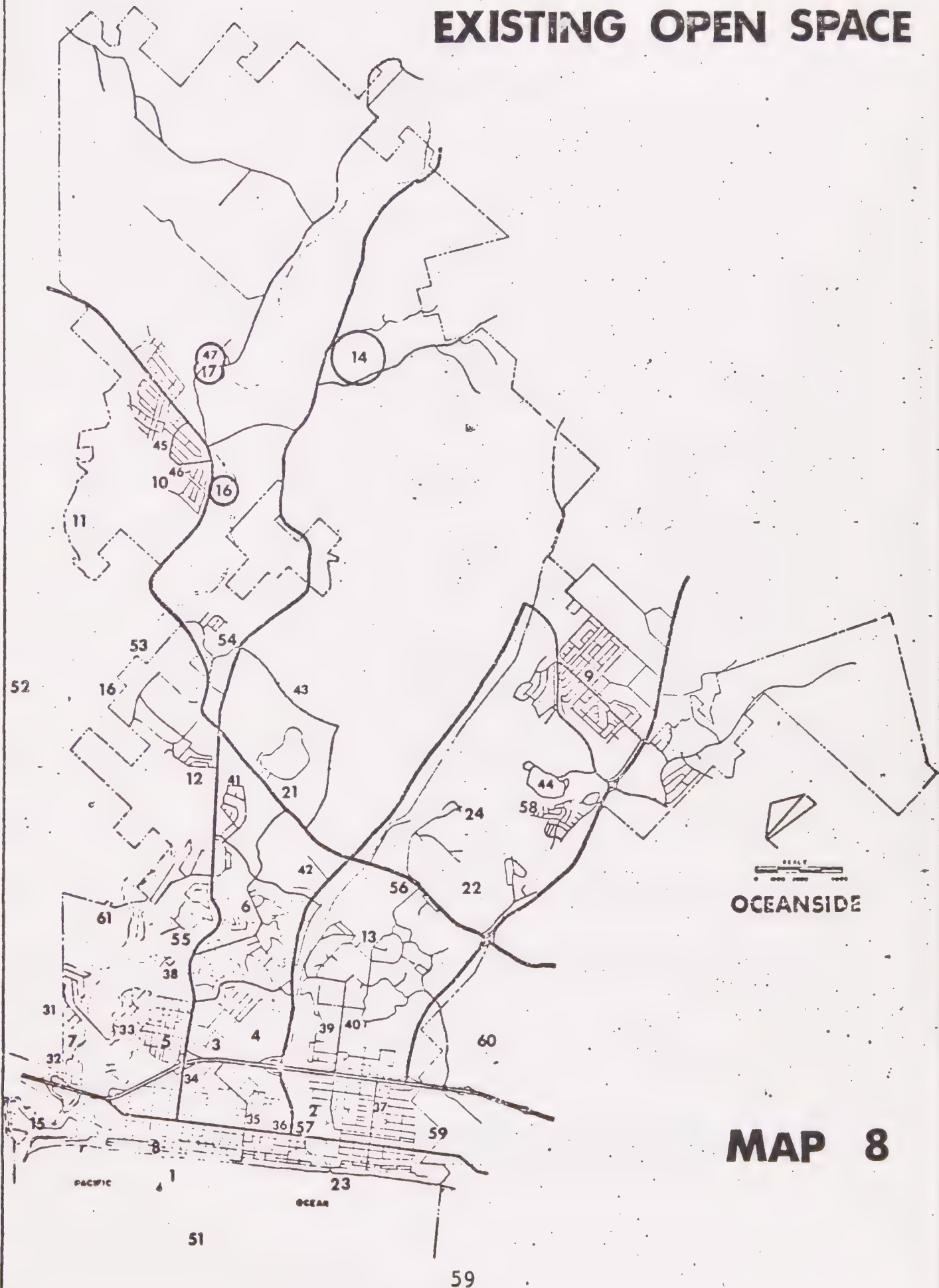
III. Schools

- | | |
|--|-----------------------------|
| 31. North Terrace Elementary | 39. Lincoln Jr. High School |
| 32. San Rafael Elementary | 40. Palmquist Elementary |
| 33. Laurel Elementary | 41. San Luis Rey Elementary |
| 34. Oceanside West High School | 42. Garrison Elementary |
| 35. St. Mary's Elementary | 43. Oceanside East High |
| 36. Ditmar Elementary | 44. MiraCosta College |
| 37. South Oceanside Elementary | 45. Pacifica Elementary |
| 38. Mission Elementary and
Jefferson Jr. High | 46. Libby Elementary |
| | 47. Libby Annex Elementary |

IV. Visual Open Space

- | | |
|----------------------------|------------------------|
| 51. Pacific Ocean | 57. Cemetery |
| 52. Camp Pendleton | 58. Utility Easement |
| 53. San Luis Rey River | 59. Buena Vista Lagoon |
| 54. San Luis Rey Mission | 60. Hosp Grove |
| 55. Rosicrucian Fellowship | 61. St. Charles Priory |
| 56. Cemetery | |

EXISTING OPEN SPACE



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